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| G.1.1 | Properties of Circles, Spheres, and Cylinders | Taught Now | Missing |  |
| G.1.1.1 | Identify and/or use parts of circles and segments associated with circles, spheres, and cylinders. |  |  |  |
| G.1.1.1.1 | Identify, determine, and/or use the radius, diameter, segment, and/or tangent of a circle. |  |  |  |
| G.1.1.1.2 | Identify, determine, and/or use the arcs, semicircles, sectors, and/or angles of a circle. |  |  |  |
| G.1.1.1.3 | Use chords, tangents, and secants to find missing arc measures or missing segment measures. |  |  |  |
| G.1.1.1.4 | Identify and/or use the properties of a sphere or cylinder. |  |  |  |
| G.1.2 | Properties of Polygons and Polyhedra |  |  |  |
| G.1.2.1 | Recognize and/or apply properties of angles, polygons, and polyhedra. |  |  |  |
| G.1.2.1.1 | Identify and/or use properties of triangles. |  |  |  |
| G.1.2.1.2 | Identify and/or use properties of quadrilaterals. |  |  |  |
| G.1.2.1.3 | Identify and/or use properties of isosceles and equilateral triangles. |  |  |  |
| G.1.2.1.4 | Identify and/or use properties of regular polygons. |  |  |  |
| G.1.2.1.5 | Identify and/or use properties of pyramids and prisms. |  |  |  |
| G.1.3 | Congruence, Similarity, and Proofs |  |  |  |
| G.1.3.1 | Use properties of congruence, correspondence, and similarity in problem solving settings involving 2 and 3 dimensional figures. |  |  |  |
| G.1.3.1.1 | Identify and/or use properties of congruent and similar polygons or solids. |  |  |  |
| G.1.3.1.2 | Identify and/or use proportional relationships in similar figures. |  |  |  |
| G.1.3.2 | Write formal proofs and/or use logic statements to construct or validate arguments. |  |  |  |
| G.1.3.2.1 | Write, analyze, complete, or identify formal proofs (e.g., direct and/or indirect proofs/proofs by contradiction). |  |  |  |
| G.2.1 | Coordinate Geometry and Right Triangles |  |  |  |
| G.2.1.1 | Solve problems involving right triangles. |  |  |  |
| G.2.1.1.1 | Use the Pythagorean theorem to write and/or solve problems involving right triangles. |  |  |  |
| G.2.1.1.2 | Use trigonometric ratios to write and/or solve problems involving right triangles. |  |  |  |
| G.2.1.2 | Solve problems using analytic geometry. |  |  |  |
| G.2.1.2.1 | Calculate the distance and/or midpoint between two points on a number line or on a coordinate plane. |  |  |  |
| G.2.1.2.2 | Relate slope to perpendicularity and/or parallelism (limit to linear algebraic equations). |  |  |  |
| G.2.1.2.3 | Use slope, distance, and/or midpoint between two points on a coordinate plane to establish properties of a 2?dimensional shape. |  |  |  |
| G.2.1.3 | Compute and/or use the slope of a line. |  |  |  |
| G.2.1.3.1 | Apply the concept of the slope of a line to solve problems. |  |  |  |
| G.2.1.4 | Solve and/or graph systems of equations and inequalities using coordinate geometry. |  |  |  |
| G.2.1.4.1 | Solve or graph systems of equations or systems of inequalities within a problem situation using coordinate geometry. |  |  |  |
| G.2.2 | Measurements of Two-Dimensional Shapes and Figures |  |  |  |
| G.2.2.1 | Use and/or compare measurements of angles. |  |  |  |
| G.2.2.1.1 | Use properties of angles formed by intersecting lines to find the measures of missing angles. |  |  |  |
| G.2.2.1.2 | Use properties of angles formed when two parallel lines are cut by a transversal to find the measures of missing angles. |  |  |  |
| G.2.2.2 | Use and/or develop procedures to determine or describe measures of perimeter, circumference, and/or area. (May require conversions within the same system.) |  |  |  |
| G.2.2.2.1 | Estimate area, perimeter, or circumference of an irregular figure. |  |  |  |
| G.2.2.2.2 | Find the measurement of a missing length, given the perimeter, circumference, or area. |  |  |  |
| G.2.2.2.3 | Find the side lengths of a polygon with a given perimeter to maximize the area of the polygon. |  |  |  |
| G.2.2.2.4 | Develop and/or use strategies to estimate the area of a compound/composite figure. |  |  |  |
| G.2.2.2.5 | Find the area of a sector of a circle. |  |  |  |
| G.2.2.3 | Describe how a change in one dimension of a 2dimensional figure affects other measurements of that figure. |  |  |  |
| G.2.2.3.1 | Describe how a change in the linear dimension of a figure affects its perimeter, circumference, and area (e.g., How does changing the length of the radius of a circle affect the circumference of the circle?). |  |  |  |
| G.2.2.4 | Apply probability to practical situations. |  |  |  |
| G.2.2.4.1 | Use area models to find probabilities. |  |  |  |
| G.2.3 | Measurements of Three-Dimensional Shapes and Figures |  |  |  |
| G.2.3.1 | Use and/or develop procedures to determine or describe measures of surface area and/or volume. (May require conversions within the same system.) |  |  |  |
| G.2.3.1.1 | Calculate the surface area of prisms, cylinders, cones, pyramids, and/or spheres. Formulas are provided on a reference sheet. |  |  |  |
| G.2.3.1.2 | Calculate the volume of prisms, cylinders, cones, pyramids, and/or spheres. Formulas are provided on a reference sheet. |  |  |  |
| G.2.3.1.3 | Find the measurement of a missing length, given the surface area or volume. |  |  |  |
| G.2.3.2 | Describe how a change in one dimension of a 3?dimensional figure affects other measurements of that figure. |  |  |  |
| G.2.3.2.1 | Describe how a change in the linear dimension of a figure affects its surface area or volume (e.g., How does changing the length of the edge of a cube affect the volume of the cube?). |  |  |  |